DOCKET NO.: 304868.01 / MSFT-2930
Application No.: 10/803,283
Office Action Dated: March 21, 2007

PATENT
REPLY FILED UNDER EXPEDITED
PROCEDURE PURSUANT TO
37 CFR § 1.116

REMARKS

Upon entry of the present amendment, claims 1-12 and 14-23 will remain pending in this application. Claim 13 is hereby cancelled. Applicants respectfully submit that no new matter is added in the above amendments.

In the outstanding Office Action, claims 1-23 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by United States Patent Application Publication No. 2003/0101169 ("Bhatt"). Applicants respectfully traverse.

Interview Summary

Applicants' undersigned representative, Mr. Eiferman, and Examiner Susan Rayyan participated in a telephonic interview on April 17, 2007, during which the above claim amendments were discussed. Examiner Rayyan agreed to reevaluate the rejections in view of the above claim amendments.

Rejections under 35 U.S.C. § 102

Claims 1-23 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by United States Patent Application Publication No. 2003/0101169 ("Bhatt"). Applicants respectfully traverse.

Claims 1-15

Independent claims 1 and 10 are directed to techniques for processing a query including an extensible markup language (XML) based expression with instructions to modify data that is stored in a node of an XML schema. As part of these techniques, an abstract syntax tree corresponding to the expression is transformed into a unified tree including XML based algebra operations. The XML based algebra operations in the unified tree are mapped to relational algebra based operations in a relational tree. The query is then executed by modifying data that is stored in the node of the extensible markup language schema in accordance with the relational tree.

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Bhatt discloses an (1) XML store engine for storing XML data; and (2) an XQL engine for querying XML data that is stored in the XML store engine. However, the Bhatt XQL engine executes only certain types of queries. In particular, the Bhatt XQL engine *only* executes queries that *read* data from the XML store engine. The Bhatt XQL engine does *not* execute queries that *modify* data in the XML store engine. Put more simply, Bhatt does not teach or suggest that the XQL engine (*i.e.,* the query processor) can modify data in the XML store engine.

The portions of the Bhatt reference cited in the Office Action (¶ 74-75), disclose that the XML store engine "transforms" raw XML data (*i.e.,* data provided by an application) into a format that can be queried by the XQL engine at a later time. However this "transformation" of XML data is different from the claimed "modification" of XML data in at least two ways:

1. The Bhatt XML data transformation is not performed as part of the query execution process (and/or performed by a query processor).

2. The Bhatt XML data transformation is not performed in accordance with a relational tree comprising relational algebra based operations

Thus, Bhatt does not teach or suggest "executing the query by modifying data that is stored in the node of the extensible markup language schema in accordance with the relational tree comprising the relational algebra based operations," as recited in independent claim 1 (or similar features from independent claim 10). Accordingly, Applicants respectfully submit that independent claims 1 and 10 are not anticipated by Bhatt. Applicants further submit that claims 2-9, 11, 12, 14 and 15 are patentable at least by reason of their dependency. Claim 13 is hereby canceled.

Claims 16-23

Independent claims 16 and 20 recite that a query is parsed to yield an XML based expression. A query plan is then generated for the XML expression including enhanced

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relational algebra expressions with a nested table abstraction operation. The query is then executed based on the query plan by performing an action on an extensible markup language schema by using the nested table abstraction operation to establish a parent to descendent relationship among instances of nodes in the extensible markup language schema without compiling separate lists.

Bhatt discloses an XQL engine that can execute queries that request data from parent and descendant nodes. However, in Bhatt, the such queries are executed by compiling a list of instances of the parent node, a list of instances of the descendant node, and then comparing the two separate lists to establish the corresponding descendant instances for each parent instance (Bhatt, ¶0129-0145).

Thus, Bhatt does not teach or suggest "executing the query based on the query plan by using the nested table abstraction operation to establish a parent to descendent relationship among instances of nodes in the extensible markup language schema without compiling separate lists," as recited in independent claim 16 (or similar features from independent claim 20). Accordingly, Applicants respectfully submit that independent claims 16 and 20 are not anticipated by Bhatt. Applicants further submit that claims 17-19 and 21-23 are patentable at least by reason of their dependency. Thus, reconsideration and withdrawal of the 35 U.S.C. § 102(e) rejections are respectfully requested.

CONCLUSION

In view of the above amendments and remarks, Applicants respectfully submit that the present application is in condition for allowance. In view of the above amendments and following remarks, Applicants respectfully request reconsideration of the present application.

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